

2007 Youth Risk Behavior Survey Tobacco Summary

South Dakota Department of Health

Office of Health Promotion

May 2008

## Executive Summary

Results from the 2007 South Dakota Youth Risk Behavior Survey (YRBS) indicate that most South Dakota high school youth do not smoke. Current use of cigarettes (one or more cigarettes in the past 30 days) decreased from 33% in 2001 to 25% in 2007. Use of spit tobacco in the past 30 days decreased from 15% in 2001 to 11% in 2007; however, 14% of high school youth still believe that spit tobacco is safer than cigarettes. Less than half (49%) of students report they were taught the dangers of tobacco use in class, compared to 46% in 2005. Fifty-seven percent of respondents were in the same room or car with someone who was smoking cigarettes in the past seven days, while in 2005, 63% were exposed to second-hand smoke.

## Results

In order to determine the prevalence of cigarette, cigar, and spit tobacco (i.e., chewing tobacco and snuff) use among South Dakota high school students, the South Dakota Department of Education, Department of Health, and Department of Human Services conducted the South Dakota Youth Risk Behavior Survey (YRBS) in 2007. This report summarizes survey data for key indicators of progress towards reducing tobacco use among South Dakota high school students for the years 2001, 2003, 2005, and 2007. It also includes information regarding knowledge, attitudes, and beliefs about tobacco in South Dakota.

YRBS defines tobacco use in the following three ways:

- ***Ever Use*** is having ever tried cigarette smoking, even one or two puffs.
- ***Current Use*** is having smoked a cigarette on one or more of the past 30 days.
- ***Frequent Use*** is having smoked a cigarette on at least 20 of the past 30 days.

## **Use of Cigarettes Among South Dakota High School Students**

Cigarette smoking is a confirmed cause of cancers of the lung and larynx, the bladder, esophagus, mouth and throat, as well as heart disease, cerebro-vascular diseases, chronic bronchitis and emphysema. Approximately 90% of people who develop these cancers have used some form of tobacco (Mayo Clinic, 2006). Cigarette smoking is also associated with increased risk for cataracts, pneumonia, acute myeloid leukemia, abdominal aortic aneurysm, stomach cancer, pancreatic cancer, cervical cancer, kidney cancer and periodontitis (MMWR, 2005). If current patterns of smoking behavior persist, an estimated 6.4 million U.S. persons who were under the age of 18 in 2000 could die prematurely from smoking-related illnesses (Hahn et al., 2002). Approximately 100 South Dakotans will be diagnosed with oral cancer each year, accounting for 2.5% of all cancer diagnoses, and 25 will die each year (South Dakota Department of Health, 2005). The five year survival rate is 59%.

The data from 2007 indicates reductions in students reporting having ever tried cigarettes. The rate of ever use of cigarettes has decreased over time from 67% in 2001 to 55% in 2007. The current use of cigarettes decreased from 33% in 2001 to 25% in 2007. See Figure 1 and 2.

Figure 1

Percentage of Respondents Who Smoked Cigarettes on One or More of the Past 30 days, by Grade Level

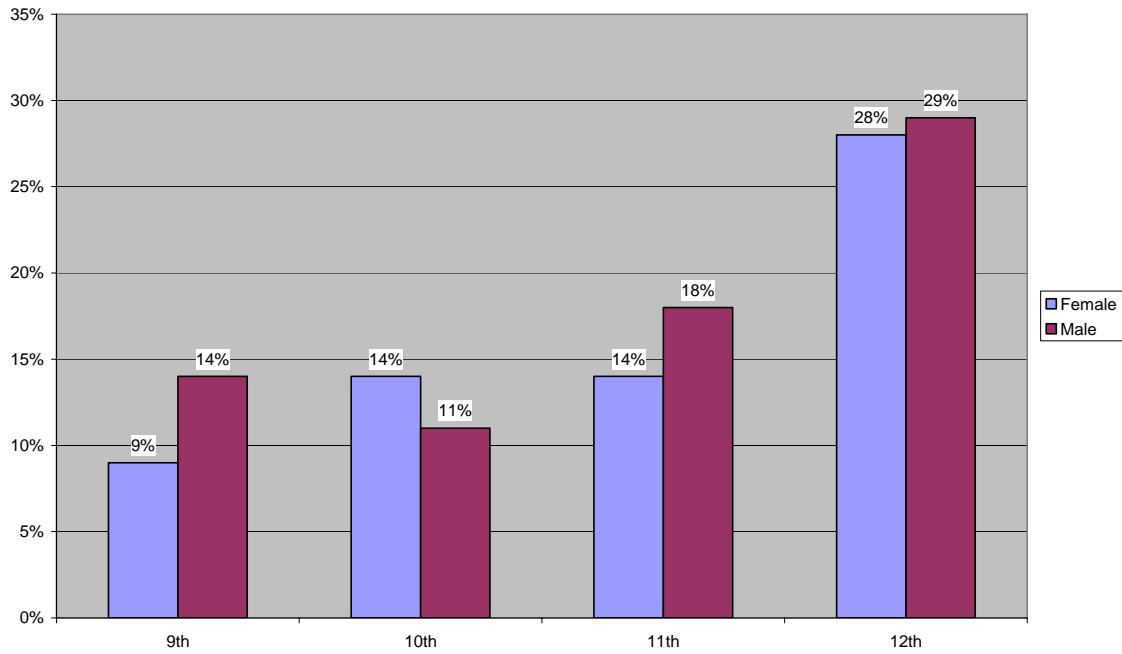
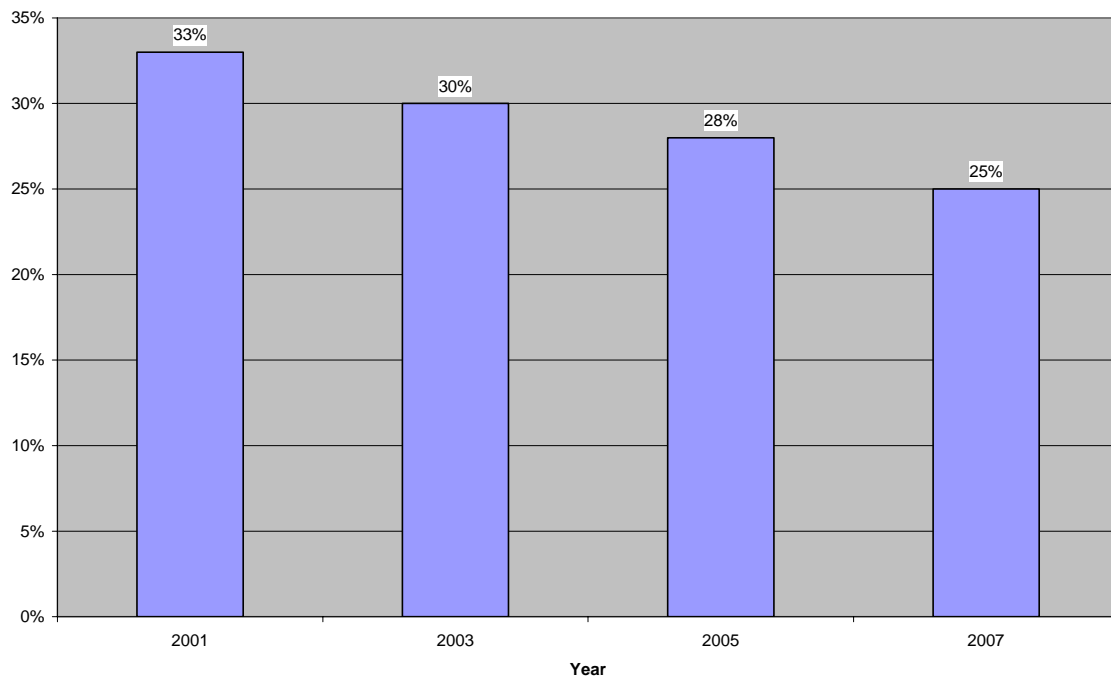


Figure 2

Percentage of Respondents Who Smoked Cigarettes On One or More of the Past 30 Days



Of current smokers, 17% smoked daily, that is at least one cigarette everyday for 30 days. This percentage has decreased significantly since 2001, when 25.5% of respondents smoked daily. See Figure 3 and 4 below.

Figure 3

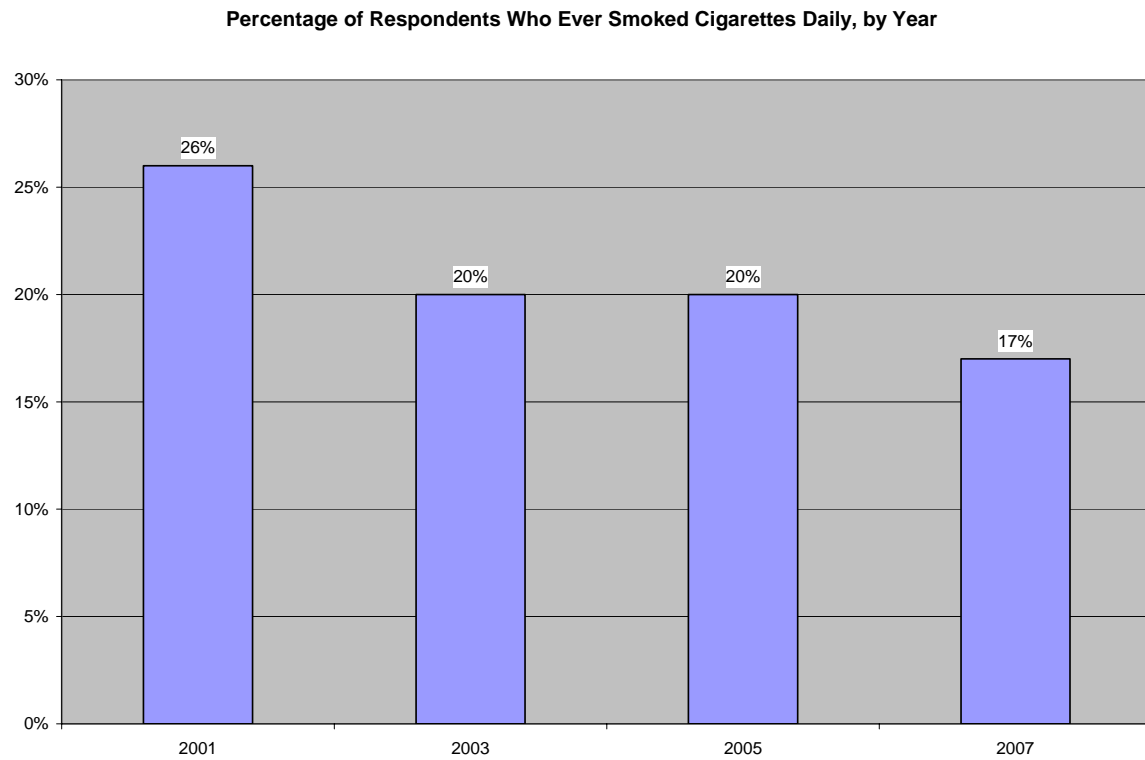
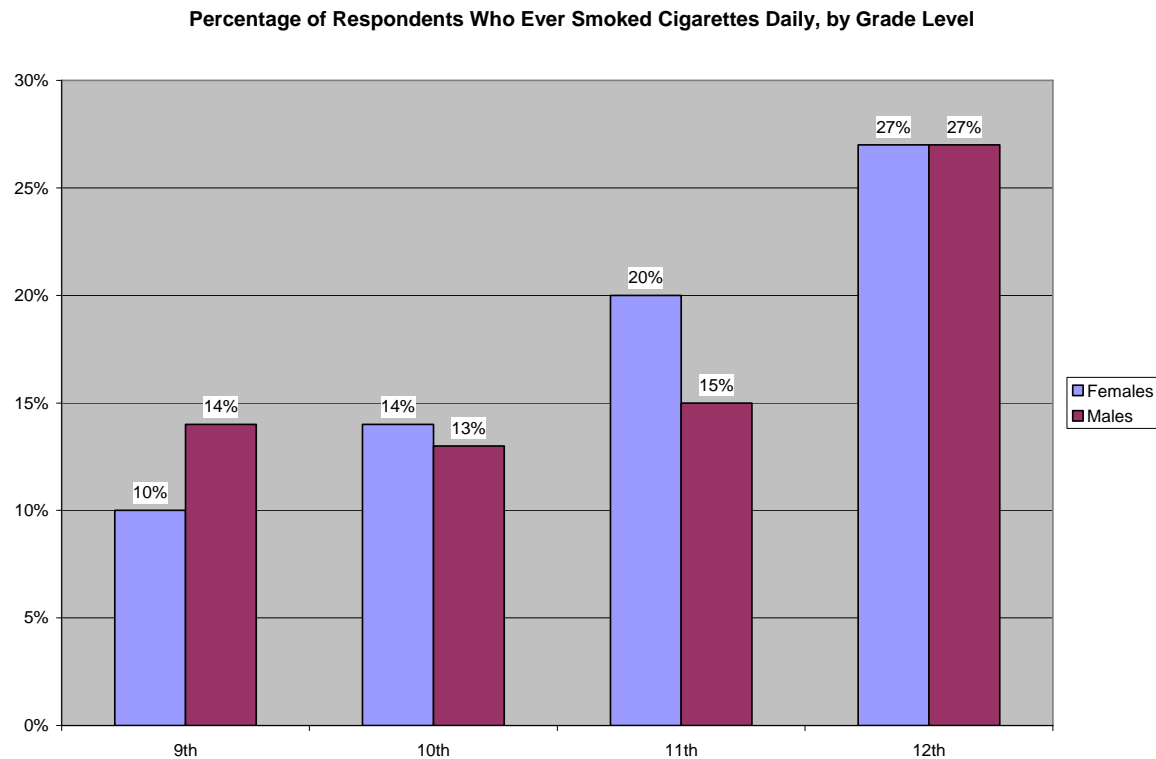
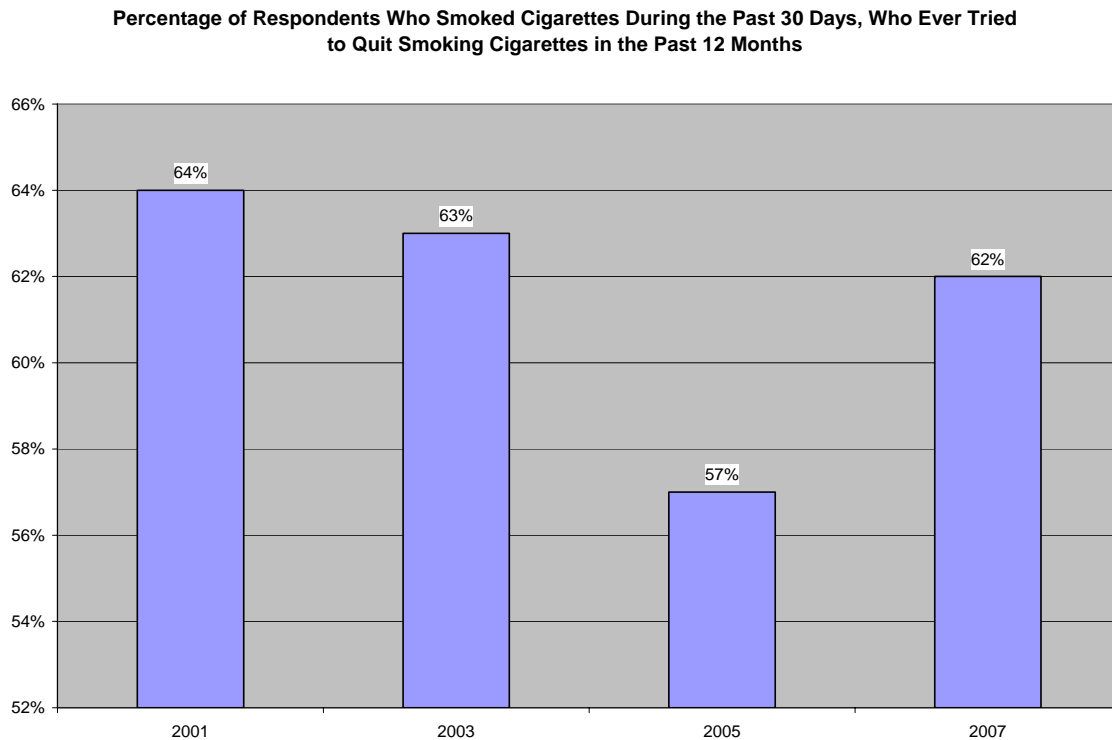


Figure 4



Studies suggest that quitting use of tobacco products and leading a healthy lifestyle will reduce cancer deaths by two-thirds (ACS, 2006). Students who smoke frequently are a subset of current smokers reported above, and they are more likely to be addicted to nicotine and to become adult smokers. Of those respondents who smoked in the past thirty days, 62% have attempted to quit smoking in the past 12 months. See Figure 5.

Figure 5



### Use of Other Tobacco Products

Spit tobacco use primarily begins in adolescence (Kopstein, 2001). Approximately 9 out of 10 people with oral cavity and pharyngeal cancers use tobacco (American Cancer Society, 2007). Oral cancer accounts for two to four percent of all cancers diagnosed annually in the United States, but relative survival rates are among the lowest of major cancers. Only about half the number of persons diagnosed with oral cancer are alive five years after the diagnosis. While survival rates for other cancers (e.g. breast, colorectal, and prostate cancers) have improved, the overall U.S. survival rate from oral and pharyngeal cancer has not improved during the past 16 years (CDC, 2004). Spit tobacco increases the risk of cancer of the cheek, gums, and inner surface of the lips by about 50 times. Often cancer associated with spit tobacco will begin as

sores in the mouth, leukoplakia, or erythroplakia (American Cancer Society, 2006). Spit tobacco also causes gum recessions and an increased risk of heart disease and stroke (CDC, 2004).

The 2005 YRBS survey was the first to ask about ever having ever tried spit tobacco. In 2007, 24% of respondents indicated they had ever used spit tobacco during their lives, compared to 25% in 2005 (Figure 6). Data indicate that ever having tried spit tobacco increases with grade level (Figure 7).

Figure 6

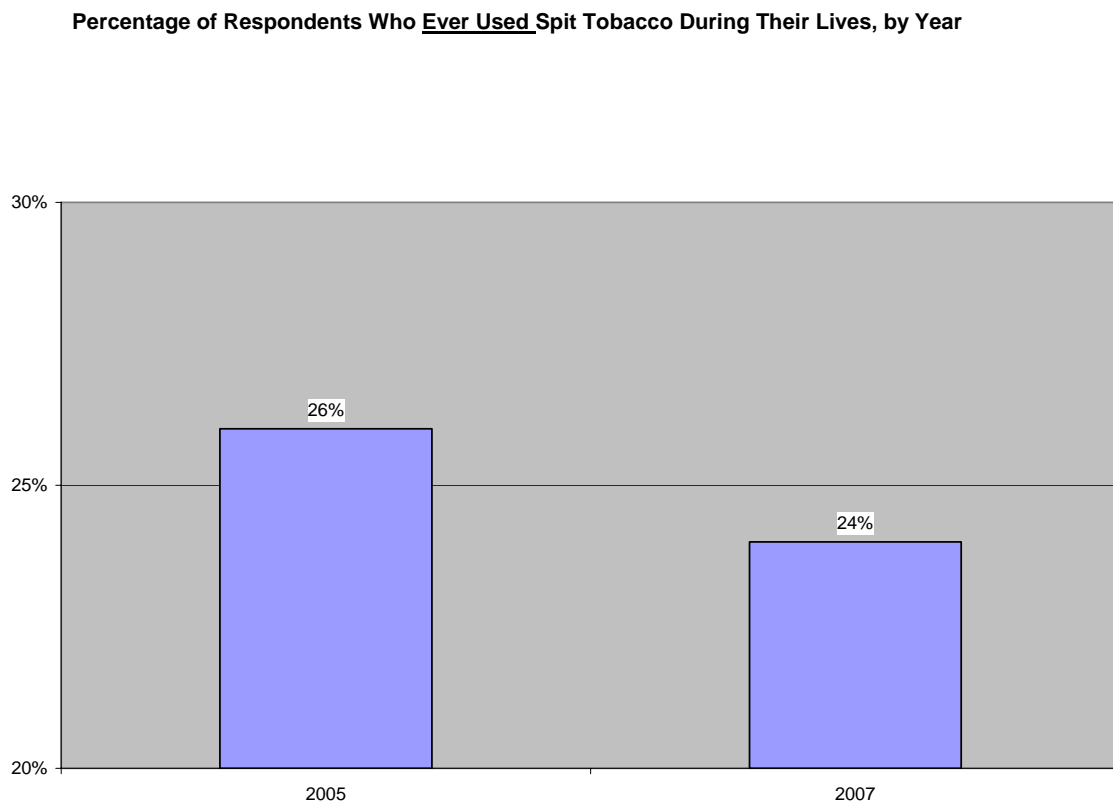
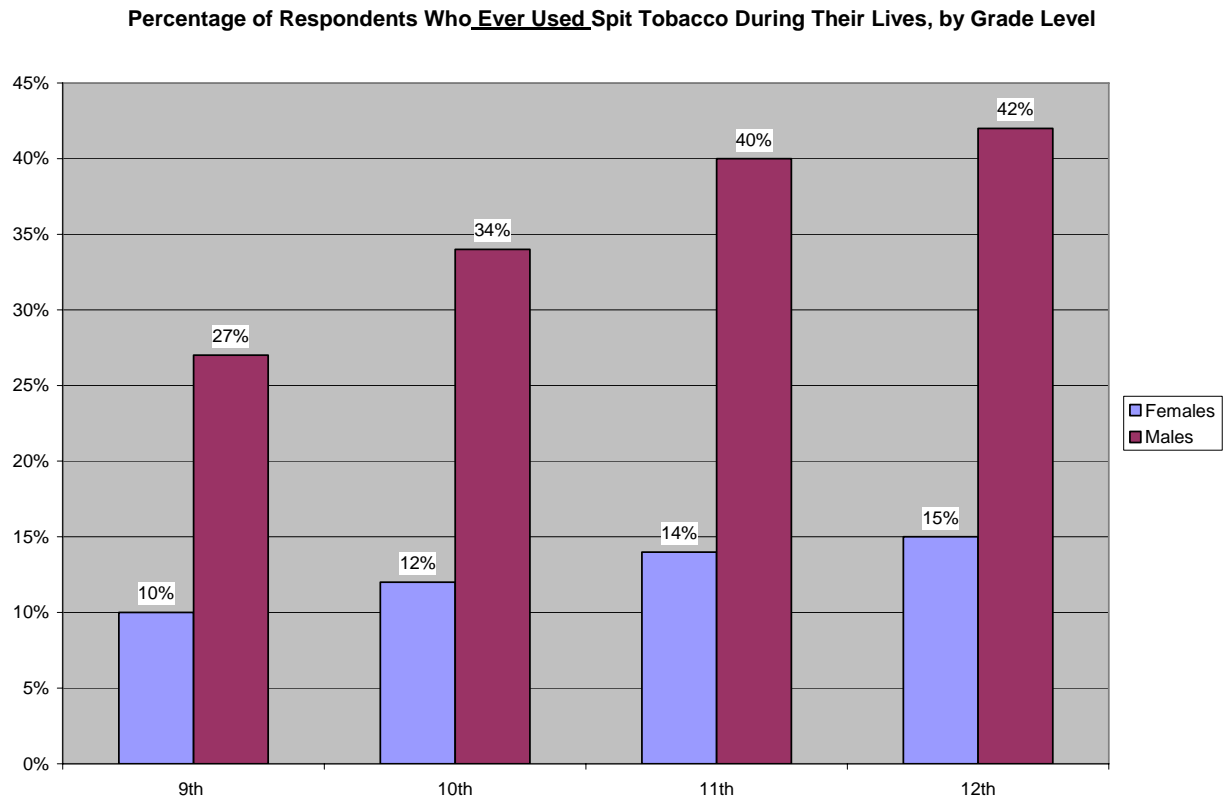




Figure 7



Data indicate that among high school students, use of spit tobacco in the past 30 days has decreased from 15% in 2001 to 11% in 2007 (Figure 8). Current use of spit tobacco was reported by 19% of high school males and 3% of females (Figure 9). Current use of spit tobacco increases with grade level.

Figure 8

Percentage of Respondents Who Used Spit Tobacco During the Past 30 Days, by Year

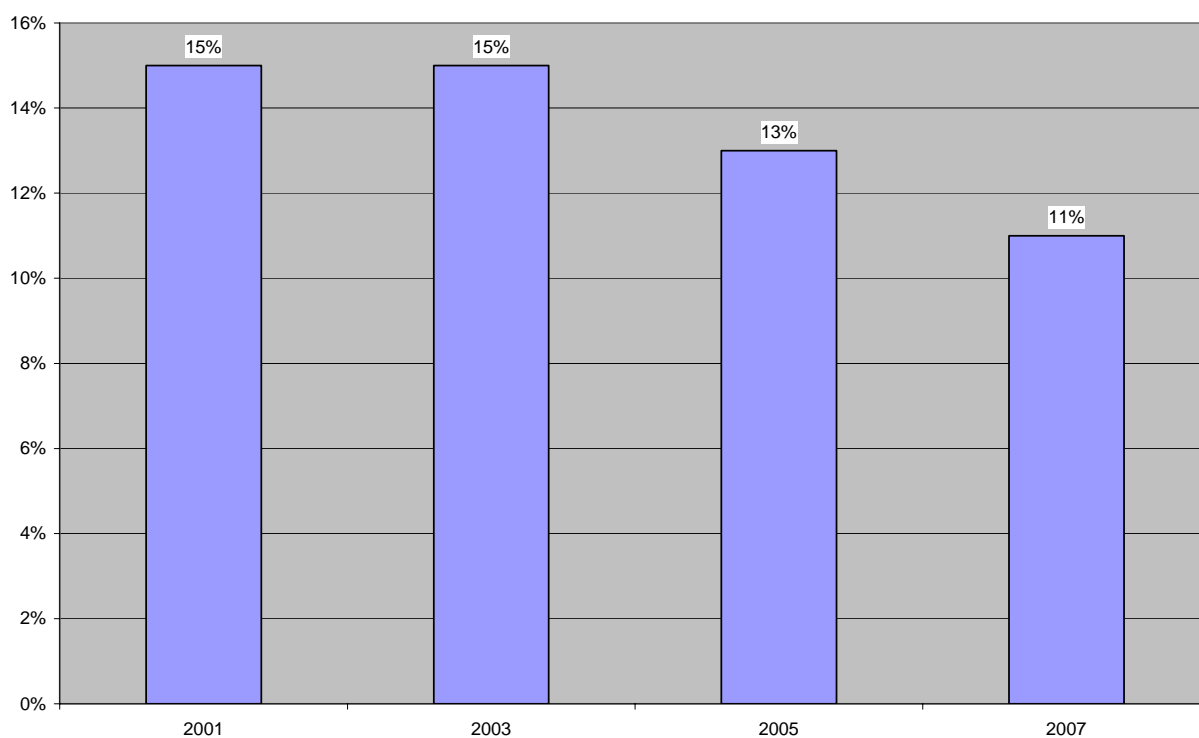
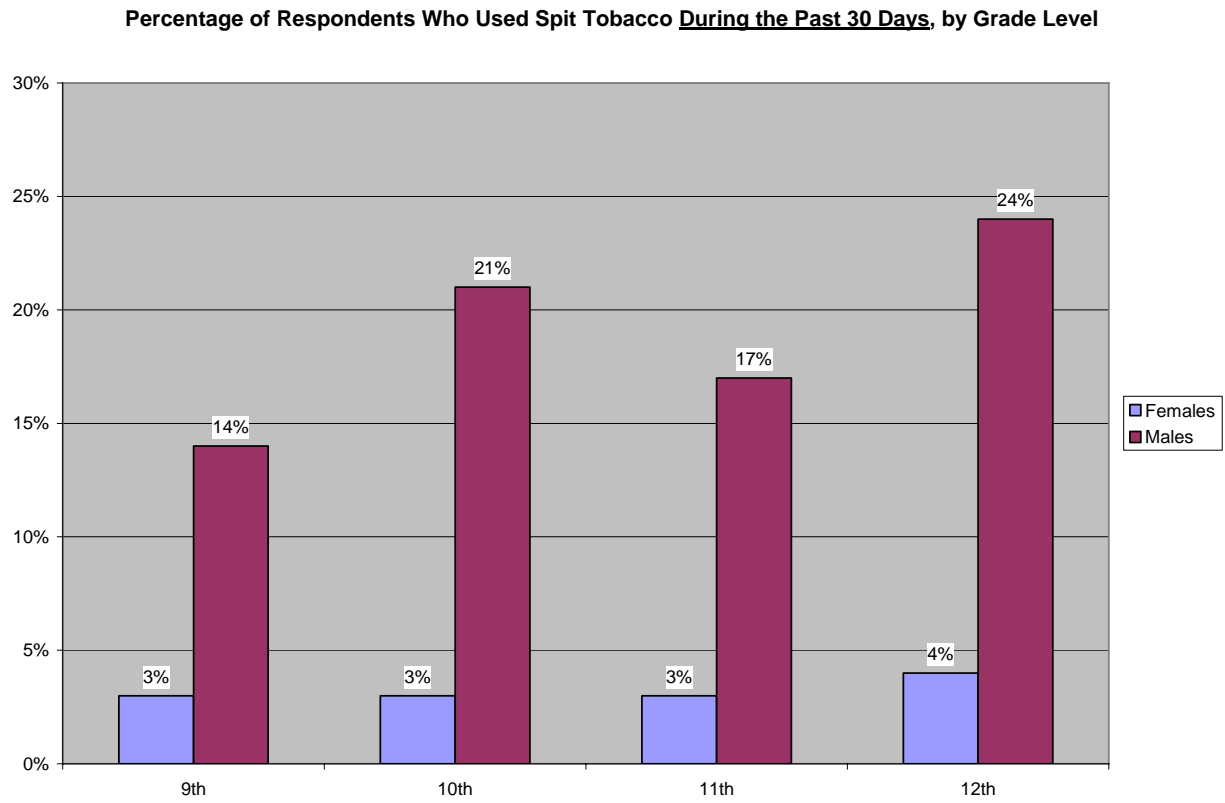


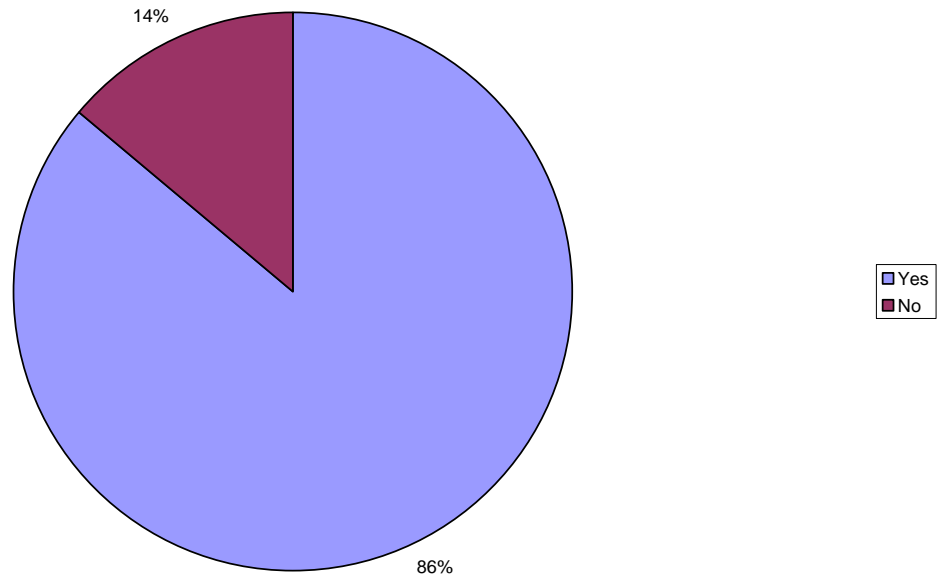
Figure 9



Fourteen percent of respondents believe that spit tobacco is safer than cigarettes (Figure 10). In 2005, 15% of respondents believed that spit tobacco was safer than cigarettes.

Figure 10

Percentage of Respondents Who Believe That Spit Tobacco is Safer Than Cigarettes



Less than half (49%) of students report they were taught the dangers of tobacco use in class (Figure 11) and as the students move through high school, the curriculum is taught less often (Figure 12). In 2005, 46% of respondents reported being taught in class about the dangers of tobacco use. The 2005 Youth Tobacco Survey (YTS), administered to middle school students in grades 6-8, indicated that 47% of students were taught the dangers of tobacco use in class (SD YTS, 2005).

Figure 11

**Percentage of Respondents Who During This School Year Were Taught In Any of Their  
Classes About the Dangers of Tobacco Use, by Year**

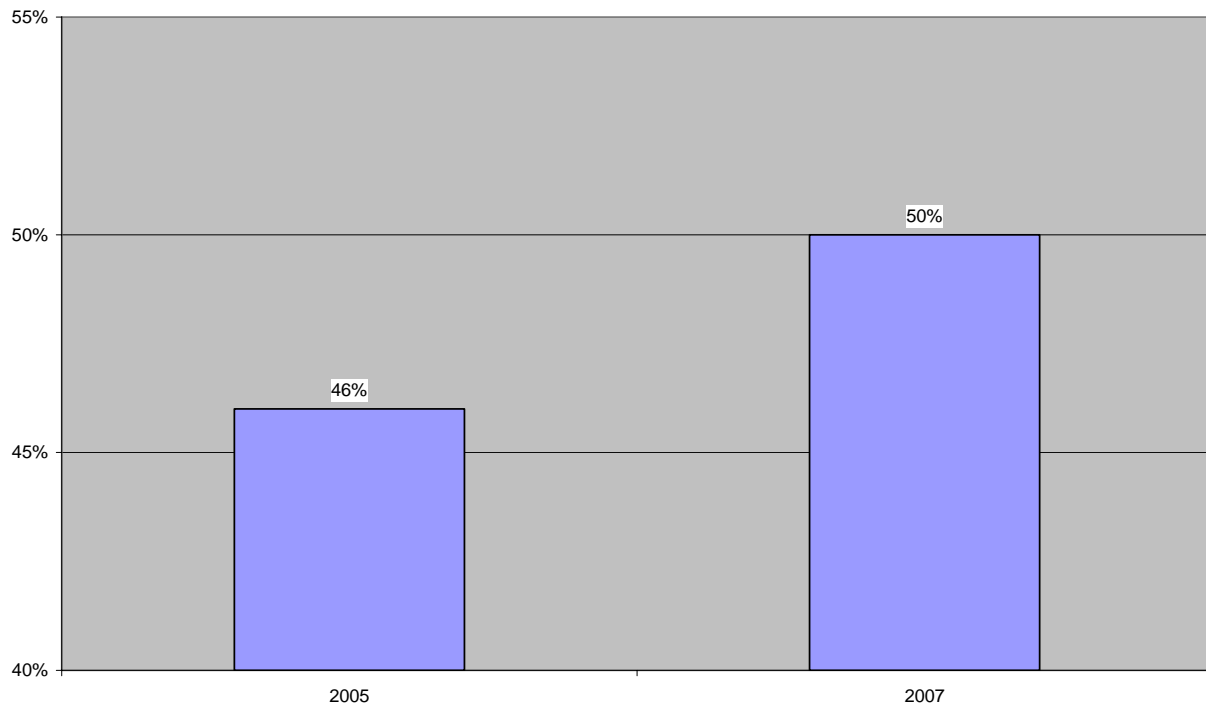
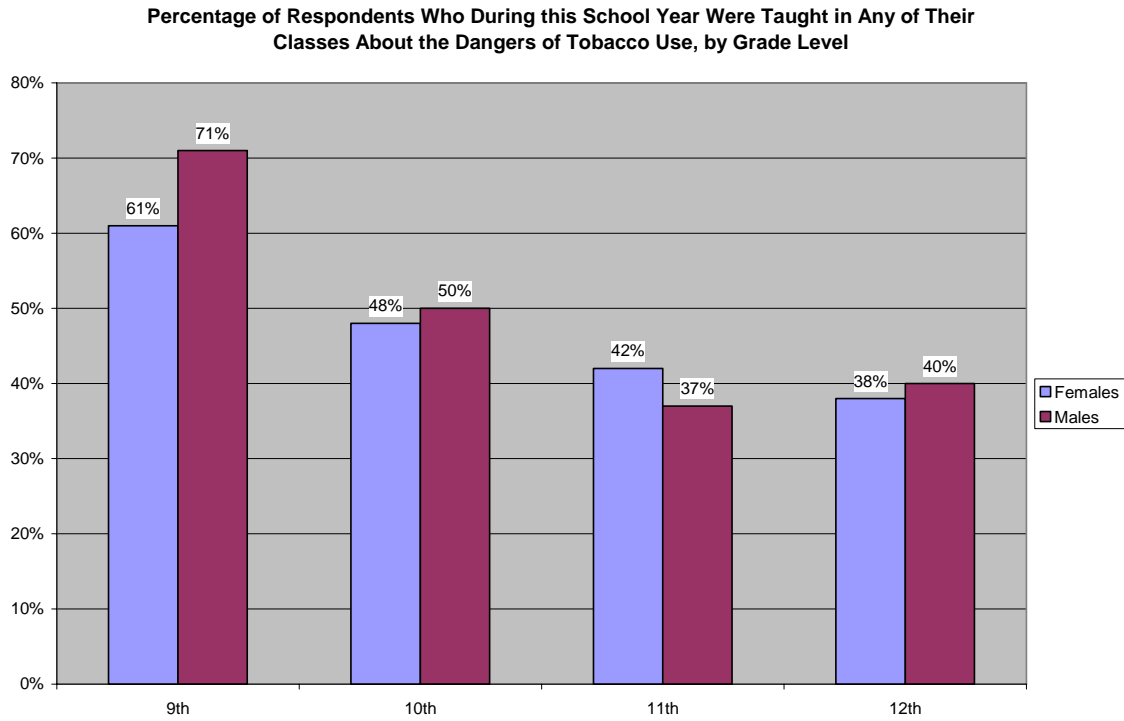


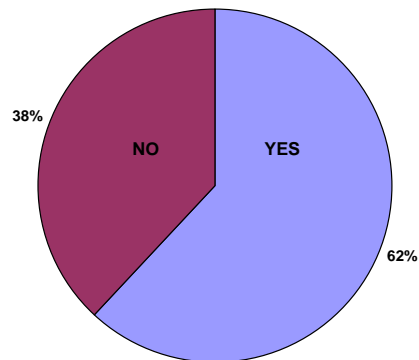
Figure 12



Fifty-six percent of respondents were in the same room or car with someone who was smoking cigarettes in the past seven days (Figure 13), compared to 62.5% in 2005.

Figure 13

**Percentage of Respondents who during the past 7 days were in the same room or car with a smoker**



## Survey Methodology

The 2007 YRBS survey consisted of a random sample of 25 schools across South Dakota. The school sample was selected using PCSample software, which is a software program specifically designed for stratified YRBS school sampling. All regular public, private, and Bureau of Indian Affairs (BIA) schools in South Dakota with students in grades 9, 10, 11, or 12 were eligible to be selected for inclusion in the sample. Completed surveys were received from 23 of the 25 sampled schools for a school response rate of 92%. The student response rate was 87%. The overall response rate was 80%. There were 1611 students who participated in the survey. The sample was comprised of 49.1% female students and 50.9% male students (Figure 14). The grade level breakdown of the sample was 27.2% ninth grade students, 25.8% tenth grade students, 23.9% eleventh grade students, and 22.8% twelfth grade students (Figure 15).

Figure 14

Respondents, by Sex

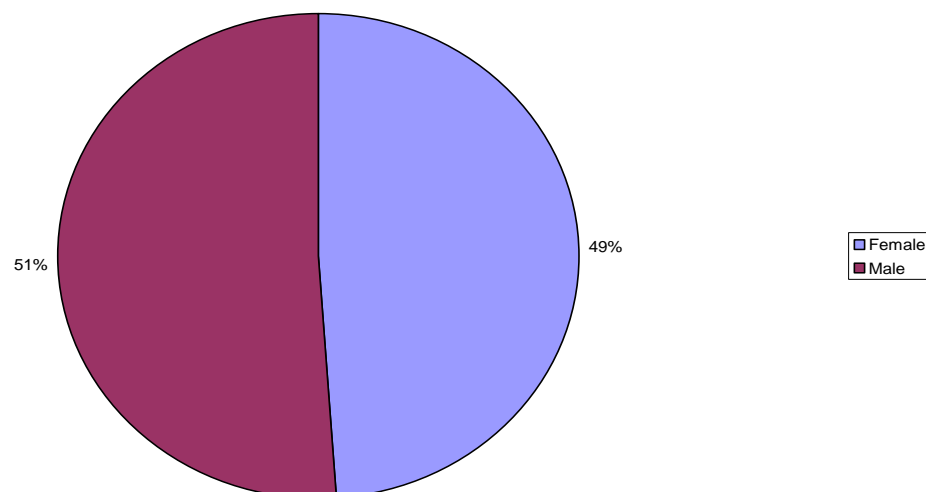
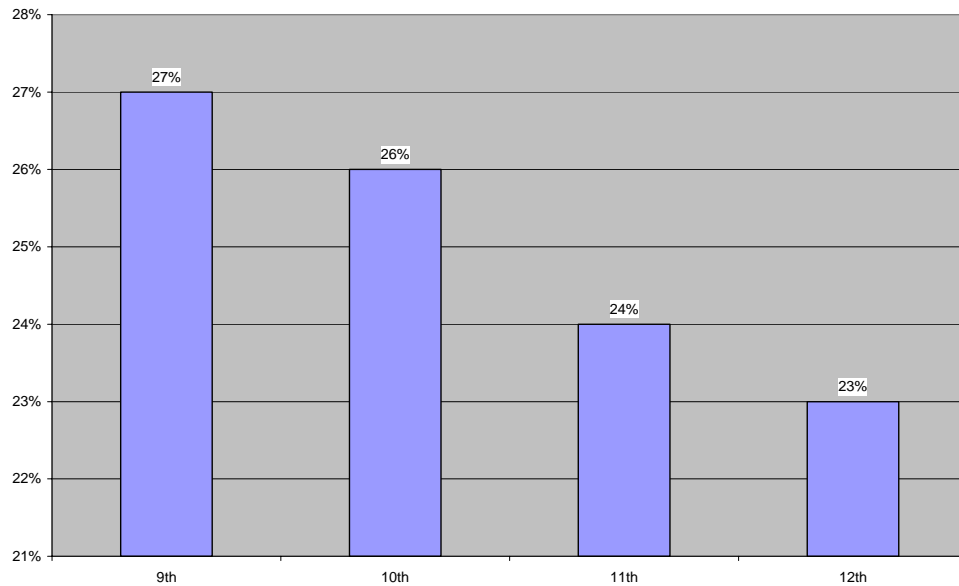


Figure 15

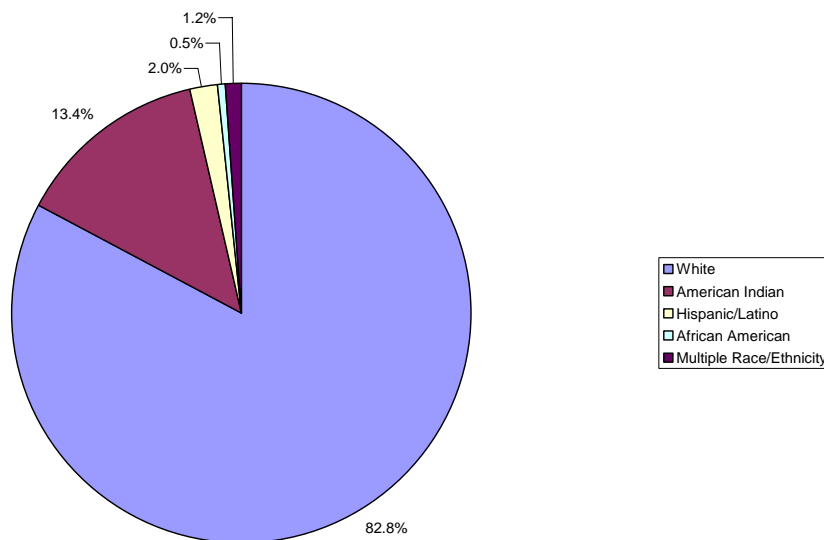
Respondents, by Grade Level



The race/ethnicity breakdown of the sample was 82.8% White, 13.4% American Indian, 2% Hispanic/Latino, 0.5% African American, and 1.2% multiple race/ethnicity (Figure 16).

Figure 16

Respondents, by race





Students completed a self-administered questionnaire that included questions about tobacco use (cigarette, cigar, and spit tobacco), exposure to environmental tobacco smoke, knowledge and attitudes about tobacco, and tobacco-use curriculum in schools.

### **Summary and Conclusions**

Tobacco use is the single leading preventable cause of death in the United States. Cigarette smoking increases risk of heart disease; chronic obstructive pulmonary disease; acute respiratory illness; stroke; and cancers of the lung, larynx, oral cavity, pharynx, pancreas, and cervix (United States Department of Health and Human Services, 2004). If current patterns of smoking behavior persist, an estimated 18,000 youth under 18 in South Dakota will ultimately die prematurely from smoking (Tobacco Free Kids, 2006). In 2007, 25% of South Dakota high school students reported current cigarette use; however, South Dakota continues to make significant progress in decreasing the number of high school youth that smoke from a high of 44% in 1999 to 25% in 2007 and decreasing current use of spit tobacco from 15% in 2001 to 11% in 2007.

The results of the South Dakota Youth Risk Behavior Survey (YRBS) offer data that are used to evaluate programmatic progress toward outcome goals and objectives, and to assist communities working to reduce the harm caused by tobacco use. The YRBS also aides the South Dakota Department of Health in prioritizing services to best meet the needs of the public. The paramount objectives of the South Dakota Tobacco Control Program are to reduce the number of people that start using tobacco, reduce the number of people exposed to secondhand smoke, and increase the number of people that quit using tobacco.

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